

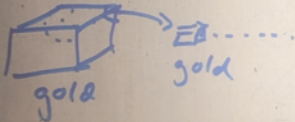
Notes: Chapter 5.4 – Kinetic Molecular Theory (KMT) –

Review of Science 8: The Atom and KMT

Review of Sci 8: The Atom and Kinetic Molecular Theory

Part A The Atom

1. An atom is the smallest particle of an element.



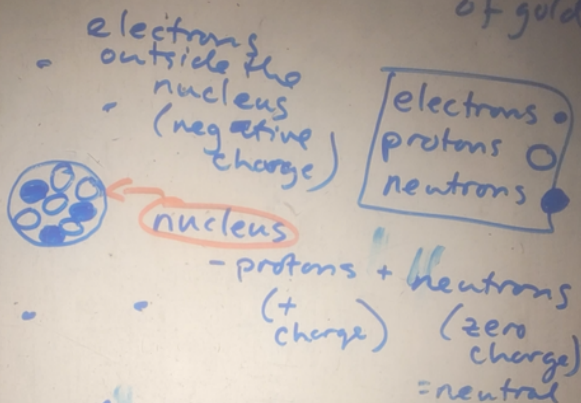
Atomic mass = 197

Atomic number 79
- it has 79 protons and 118 neutrons

$79 + 118 = 197$

mass of 1 atom of gold

2.

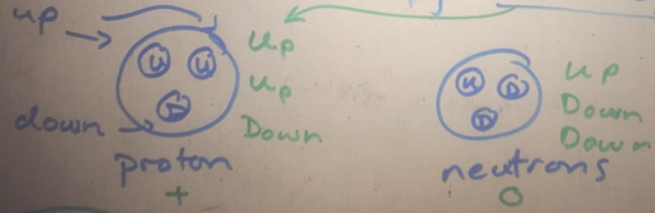


electrons outside the nucleus (negative charge)

nucleus

protons + neutrons (+ charge) (zero charge) = neutral

3. protons and neutrons are made of Quarks



up →

down →

proton +

up

up

Down

neutrons

Part B: Kinetic Molecular Theory (KMT)

Motion

particles that make up matter

an idea that is not fully understood yet
→ describe and explain behaviour

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KMT Definition

- ① → all matter is made of particles
- ② → different types of matter are made of different types of particles
- ③ → the more energy, the faster the particles
(eg. heat energy)
- ④ → particles in solids and liquids are bound to each other. As the particles move further apart the force of attraction gets smaller

Part B KMT

4. ~~(a)~~ Not in KMT (but it's true in general)

→ (b) yes - in KMT

~~(c)~~ Not true and not in KMT

(d) yes - in KMT

5. (d)

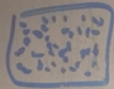
6. - all particles are in motion

7. particles

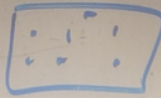
8. idea to explain the behaviour of matter

9. speed increases

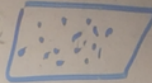
10.



solid



gas



liquid

11. solid

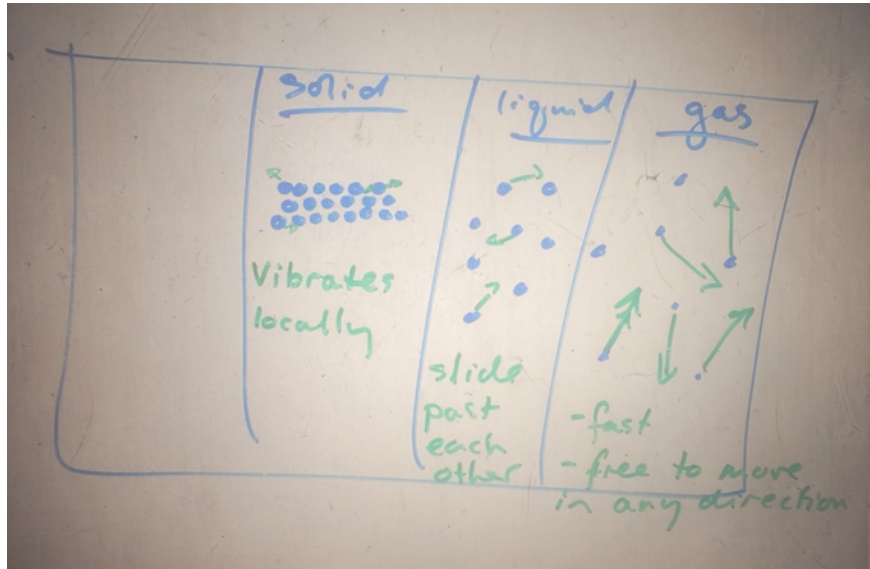
12. gas

13. liquid evaporates + becomes gas - the particles move and spread out to fill the room

14. The gas particles in the balloon move faster and hit the sides of the balloon, stretching it more.

Chapter 5.4 – Kinetic Molecular Theory – handout

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Page 2 – Changes of State, explained with KMT

